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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,091	03/02/2004	Eun-sook Kang	46187	1204

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EXAMINER
AMINI, JAVID A

ART UNIT	PAPER NUMBER
2628	

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	10/790,091	KANG, EUN-SOOK
Office Action Summary	Examiner	Art Unit	
	Javid A. Amini	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 February 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Response to Arguments

Applicant's arguments filed 2/9/2006 have been fully considered but they are not persuasive.

Applicant on page 5 responded appropriately to the rejection claims 1-14 under 53 U.S.C. §112, first paragraph. The rejection of claims 1-14 under 53 U.S.C. §112, first paragraph has been withdrawn.

Applicant at last paragraph on page 6 argues that the reference Ishizaka does not teach the basic function of embodiments of the present invention.

Examiner's reply: Examiner agrees with the function of embodiments discloses at paragraph 0002 of the specification, but the claim language in claim 1 does not claim maintaining image quality.

Examiner's comments: Ishizaka in fig. 14 illustrates by enlarging an image from 3x3 pixels into 4x4 pixels, i.e. determined the number of pixels in the image as Applicant discloses at the bottom of page 6. The Ishizaka determines an enlargement ration corresponding to the determined number of pixels, e.g., the enlarged value for a pixel Q21 is equal to summation of pixels P11 and P21 and divided to number of pixels in original image. Ishizaka at 0197 teaches the configuration of using enlarged image data to perform print processing and display has been described, this work can also be applied to various machines and systems for handling images, such as a copier comprising the color scanner 32, the image processing apparatus 5, and the print engine 70 in one piece.

Applicant on page 7 argues similar to the previous arguments.

Examiner's suggestion: Applicant may use the following terms in the claim invention:

e.g., enlarged image can be printed without degrading image quality or a LUT determines the

enlargement ratio in respect to number of pixels. Examiner encourages Applicant to schedule an

interview.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-14 rejected under 35 U.S.C. 102(e) as being anticipated by Ishizaka U.S.

2003/0179953 A1.

1.   Re. claim 1.

Ishizaka at paragraph 0057 discloses that the print engine has a print output processing section

for performing predetermined printout processing for the enlarged image, i.e. similar to the

following claim invention: "A method of enlarging an image and printing an enlarged image, the

method comprising:" Ishizaka in fig. 2 illustrates an original image (i.e. an image file) to be

enlarged image at block 664, and printing an enlarged image in fig. 1 using block 70, see

following claim language: "identifying an image file having an image to be enlarged and

printed". Ishizaka at paragraph 0009 Hitherto, a large number of techniques have been proposed

as a technique of performing enlargement processing of a multilevel image represented with a

multi-step gradation, namely, finding the values of pixel positions after enlargement. For

example, enlargement techniques based on interpolation of nearest neighbor method, linear

interpolation or bilinear method, cubic convolution method, which will be hereinafter also

referred to as interpolation enlargement techniques, are well known. At paragraph 0026 there is

provided an image processing apparatus for performing enlargement processing of an original

image represented by a large number of pixels to provide an enlarged image, the image

processing apparatus comprising a first image enlargement processing section for enlarging the

original image at a preset enlargement ratio; a domain block extraction section for dividing the

original image in first block units, thereby extracting a plurality of domain block images; and a

range block extraction section for extracting a range block image in a second block unit larger

than the first block unit about an initial enlarged image provided by the first image enlargement

processing section, see portion of the claim invention: "determining the number of pixels of the

image using the determined image file". Ishizaka at paragraph 0010, the nearest neighbor method

is a method of using as each pixel value after enlargement, the pixel value of the nearest pixel

when each pixel is inversely mapped onto the original image. For example, letting the

enlargement ratio in the x direction be a and that in the y direction be b, an inverse map point on

the original image resulting from multiplying each coordinate point (X, Y) after enlargement by

$1/a$ and $1/b$ is calculated and the pixel value on the original image nearest to the inverse map

point is used as the pixel value of (X, Y), i.e. similar to the following claim invention:

"determining an enlargement ratio corresponding to the determined number of pixels". Ishizaka

at paragraphs 0057-0058 discloses that (copied and pasted from the published document) the

print engine 70 has a print output processing section 72 for performing predetermined printout

processing for the enlarged image data D10 output from the image processing apparatus b, a

laser light source 74 for emitting a light beam, a laser drive section 76 for controlling, namely,

modulating the laser light source 74 in accordance with data output from the print output

processing section 72, and a polygon mirror (rotating polygon mirror) 78 for reflecting the light

beam emitted from the laser light source 74 toward a photosensitive member 79. The print output

processing section 72 generates data representing a plurality of separation colors, preferably at

least three separation colors in accordance with a known art for the enlarged image data D10

representing an enlarged image and renders the data (expands the data to raster data). For

example, from a YCrCb color system represented by decompression color correction digital data

D10, at least three (preferably, four) data pieces are mapped into a CMY color system or a

CMYK color system, for example, and raster data subjected to color separation for printout is

generated, see similarity of the following claim language: "enlarging the image at the determined

enlargement ratio and printing the enlarged image". The rejection of claims 6 and 12 is similar to

the rejection of claim 1.

2.   Re. claims 2, 3 and 7-8.

The step of claim 2 is inherent because Ishizaka at paragraph 0006 discloses displaying or

printing of such digital images with high quality has been demanded with distribution of digital

cameras. The digital camera has numerous image files. Re. claims 3 and 8, the digital camera can

be considered as an outside source.

3.   Re. claims 4, 9 and 13.

Ishizaka at paragraph 0006 discloses when the objective image is again formed from the set of

the range block positions; coordinate conversion, and pixel value conversion, the operation of

assigning the result of performing coordinate conversion and pixel value conversion to range

block for any initial image to domain block is iterated.

4.   Re. claims 5, 10 and 14. Ishizaka at paragraph 0115 discloses the iterated processing

control section 672 determines whether or not the current local collage processing is at the last

time (S230).

5.   Re. claim 11. Ishizaka illustrates in table 1, under paragraph 0123.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Javid A. Amini whose telephone number is 571-272-7654. The
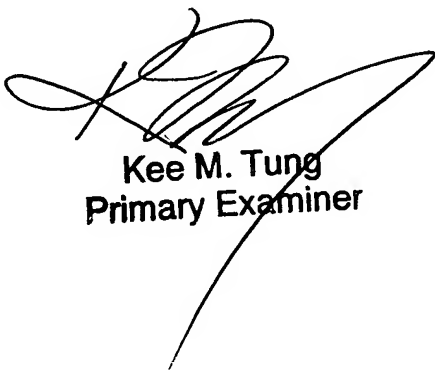
examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

> Javid A Amini
> Examiner
> Art Unit 2628

Javid Amini

Kee M. Tung
Primary Examiner